In the Claims:

1. (Currently Amended) A method of forming [[an]] active ~~region,~~ regions, the method comprising the steps of:

applying a mask layer to an active layer;

patterning the mask layer to ~~expose areas~~ define active regions and inactive regions of the active layer;

~~etching the exposed areas of the active layer;~~ and

oxidizing ~~exposed areas of~~ the inactive regions of the active layer such that the active regions of the active layer are electrically isolated from each other.

2. (Original) The method of claim 1 wherein the active layer is an active layer of a silicon-on-insulator wafer.

3. (Currently Amended) The method of claim 1 ~~wherein the step of etching includes~~ further comprising partially removing the active layer in the inactive regions ~~of the exposed areas~~.

4. (Currently Amended) The method of claim 1 wherein the active layer is about 200 Å to about 1000 Å in thickness and further comprising ~~the step of etching includes~~ partially removing the active layer in the inactive regions ~~exposed areas~~.

5. (Original) The method of claim 1 wherein the mask layer is about 10 Å to about 1500 Å in thickness.

6. (Canceled)

7. (Currently Amended) The method of claim 1 wherein the active layer is about 25 Å to about 400 Å in thickness and ~~the step of etching includes the step of removing the mask layer such that~~ substantially all of the active layer remains in the inactive regions.

8. (Original) The method of claim 1 wherein the mask layer comprises a material selected from the group consisting of oxide, silicon dioxide, silicon nitride, silicon oxynitride, high-K dielectric, or a combination thereof.

9. (Currently Amended) The method of claim 1 further comprising ~~the step of~~ removing the mask layer on the active layer after the oxidizing ~~partially removing the active layer in the exposed areas~~.

10. (Original) The method of claim 1 wherein the active layer is formed from a material selected from the group consisting of silicon, germanium, silicon-germanium, and combinations thereof.

11. (Original) The method of claim 1 wherein the step of oxidizing is performed at about 700° C to about 1200° C.

12. (Original) The method of claim 1 wherein the step of oxidizing is performed by one or more steps of annealing by a furnace anneal or rapid thermal anneal process.

13. (Original) The method of claim 1 wherein the step of oxidizing is performed by one or more steps of annealing by a furnace anneal or rapid thermal anneal process at a temperature about 500° C to about 1250° C.

14. (Original) The method of claim 1 wherein the step of oxidizing creates an oxidation layer about 25 Å to about 800 Å in thickness.

15. (Original) The method of claim 1 wherein the step of oxidizing is performed with an ambient content comprising O_2, H_2O, NO, or some combination thereof.

16. (Currently Amended) A method of forming an active region, the method comprising:

applying a mask layer onto an active layer of a silicon-on-insulator (SOI) wafer, the SOI wafer having a substrate layer, ~~an insulator layer, and an~~ the active layer and an insulator layer therebetween;

patterning the mask layer to expose areas of the active layer;

etching the SOI wafer such that the exposed areas of the active layer are partially removed; and

oxidizing the SOI wafer such that ~~exposed~~ oxidized areas of the active layer ~~are oxidized~~ extend through to the insulator layer.

17. (Original) The method of claim 16 wherein the active layer is about 200 Å to 1000 Å in thickness.

18. (Original) The method of claim 16 wherein the step of patterning the mask layer is performed by utilizing a photoresist.

19. (Original) The method of claim 16 wherein the mask layer comprises a material selected from the group consisting of oxide, silicon dioxide, silicon nitride, silicon oxynitride, high-K dielectric, or a combination thereof.

20. (Original) The method of claim 16 wherein the mask layer comprises a silicon dioxide layer about 10 to 200 Å in thickness and a silicon nitride layer about 20 to 1000 Å in thickness.

21. (Original) The method of claim 16 wherein the step of oxidizing is performed at about 500° C to about 1250° C.

22. (Original) The method of claim 16 wherein the step of oxidizing is performed with an ambient content comprising O_2, H_2O, NO, or some combination thereof.

23. (Original) The method of claim 22 wherein the step of oxidizing is performed by one or more steps of annealing by a furnace anneal or a rapid thermal anneal process at a temperature about 500° C to about 1250° C.

24. (Currently Amended) The method of claim 16 further comprising ~~the step of~~ removing the mask after etching the active layer.

25. (Original) The method of claim 16 wherein the active layer is formed from a material selected from the group consisting of silicon, germanium, silicon-germanium, and combinations thereof.

26. (Currently Amended) The method of claim 16 wherein the step of ~~partially removing~~ etching includes removing ~~inactive~~ exposed areas of the active layer such that about 25 Å to about 400 Å of the active layer remains.

27. (Original) The method of claim 16 wherein the step of oxidizing results in an oxidation layer about 25 Å to about 800 Å in thickness.

28. (Currently Amended) A method of forming [[an]] active ~~region,~~ regions, the method comprising:

applying a mask layer onto an active layer of a silicon-on-insulator (SOI) wafer, the SOI wafer having the active layer, a substrate layer, ~~an insulator layer,~~ and an ~~active~~ insulator layer between the active layer and the substrate layer;

patterning the mask layer to identify active regions and inactive regions of the active layer;

~~etching the SOI wafer such that the inactive regions of the mask layer are removed and substantially all of the active layer remains;~~ and

oxidizing the SOI wafer such that oxidized portions of the active layer in the inactive regions ~~of the active layer are oxidized~~ extend through to the insulator layer.

29. (Original) The method of claim 28 wherein the step of patterning the mask layer is performed by utilizing a photoresist.

30. (Original) The method of claim 28 wherein the mask layer comprises one or more layers comprising a material selected from the group consisting of oxide, silicon dioxide, silicon nitride, silicon oxynitride, high-K dielectrics, or a combination thereof.

31. (Original) The method of claim 28 wherein the mask layer comprises a silicon dioxide layer about 10 Å to about 200 Å in thickness and a silicon nitride layer about 20 Å to about 1000 Å in thickness.

32. (Original) The method of claim 28 wherein the active layer is about 25 Å to about 400 Å in thickness.

33. (Original) The method of claim 28 wherein the step of oxidizing results in an oxidation layer about 25 Å to about 800 Å in thickness.

34. (Currently Amended) The method of claim 28 wherein the step of applying a mask layer includes ~~the step of~~ applying a photoresist mask on the mask.

35. (Currently Amended) The method of claim 28 further comprising ~~the step of~~ removing the mask after etching the active layer.

36. (Original) The method of claim 28 wherein the active layer is formed from a material selected from the group consisting of silicon, germanium, silicon-germanium, and combinations thereof.

37. (Original) The method of claim 28 wherein the step of oxidizing is performed with an ambient content comprising O_2, H_2O, NO, or some combination thereof.

38. (Original) The method of claim 28 wherein the step of oxidizing is performed by one or more steps of annealing by a furnace anneal or a rapid thermal anneal process at a temperature about 500° C to about 1250° C.